RI Environmental Monitoring Collaborative
Biodiversity/Habitat Monitoring Subgroup Meeting
20 July 2005, 9:30 AM
Large Conference Room URI Bay Campus

Agenda

The purpose of the RIEMC subgroup meeting on biodiversity/habitat monitoring is to address the questions below and identify needs or issues that require further attention. The scope of our discussions is non-game wildlife, plant and animal populations of special concern (e.g., rare, invasive), and ecological communities/habitats. Monitoring of game species or commercially important species (e.g., fish, shellfish) is done by other programs and is not a focal topic here. Our primary audience is decision-makers and resource managers.

Question: Who is the audience for biodiversity/habitat monitoring information and what are they required (or want) to know?

Some of the audiences and their monitoring mandates/programs are below. Is there (or can there be) optimum data/information exchange among monitoring entities?

A)TNC, Conservation by Design monitoring requirement

> *"For purposes of assessing progress toward our mission, The Nature Conservancy defines conservation success as the combination of three outcomes: the maintenance of viable biodiversity, abatement of critical threats, and effective protection and management of places where we take action with partners. These outcomes are measured in a variety of ways and at multiple scales, from local conservation areas to global habitats within the framework of both the 5-S approach and our ecoregional assessment methods. The results are used to guide management actions, resource allocation and future investments."*

B. State Wildlife Grant (SWG) Monitoring Requirements

> *" Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions;"*

C. DEM Heritage Program

> *"The NHP has developed lists of those species considered to be endangered, threatened, or of special concern in the state. Surveys are conducted annually to locate and monitor rare plants, vertebrate and selected invertebrate animals, and exemplary natural communities. In addition, the Program is a cooperator in several long term surveys to define the distribution and status of selected biotic groups, including breeding birds, reptiles and amphibians, and plants. These surveys will provide a library of baseline information upon which to assess future changes in the Rhode Island environment. The NHP works closely with*

several groups on these studies including the Rhode Island Wild Plant Society, Rhode Island Natural History Survey (www.edc.uri.edu/rinhs/), and the New England Plant Conservation Program (www.newfs.org/nepcop.htm)."

D. DEM Forest Management Monitoring

USDA Forest Service-driven monitoring -- " The USDA Forest Service, Forest Health Monitoring (FHM) is a national program designed to determine the status, changes, and trends in indicators of forest condition on an annual basis. The FHM program uses data from ground plots and surveys, aerial surveys, and other biotic and abiotic data sources and develops analytical approaches to address forest health issues that affect the sustainability of forest ecosystems.

"" Detection Monitoring (DM) is the most extensive of three monitoring activities in Forest Health Monitoring (FHM). It is designed to provide data to determine baseline or current conditions of forest ecosystems, and detect changes and trends over time. This information is analyzed to determine if detected changes are anticipated, and if those changes indicate forest health. Monitoring the health of forest ecosystems requires an integrated approach at multiple scales utilizing a variety of tools from satellites and aircraft to ground-based measurements and surveys."

"The Evaluation Monitoring (EM) component of the Forest Health Monitoring program is designed to determine the extent, severity, and causes of undesirable changes in forest health identified through Detection Monitoring (DM) and other means. The need for EM projects arises when significant forest health changes or trends are found in DM."

E. DEM Wetland Monitoring

"The goal of wetland monitoring and assessment in Rhode Island is to improve wetland protection and management by understanding the cumulative impacts of human activities on wetland condition. This understanding, grounded in scientific evidence, can help guide future management and protection actions by the State, municipalities, local organizations, non-profit groups, and citizens."

F. RINHS/Invasive Species Council Invasive Species Monitoring

"A chief goal of coordinated environmental monitoring should be to identify small problems in time to prevent them from growing, and invasive species is one area where diligent monitoring and a planned response could save a great deal of effort, money, and damage by preventing or limiting introductions of harmful species. RINHS proposes to set up a central coordination system and data repository for invasive species in Rhode Island, and to work with existing monitoring programs to initiate invasive species monitoring at selected sites."

G. RI Natural History Survey EIMS Program

The Environmental Inventory, Monitoring, and Stewardship (EIMS) Program "Gathers information on Rhode Island's flora, fauna, and natural communities; Maintains a database of the state's biological heritage, along with associated collections, data, and maps; Manages the Rhode Island Natural Heritage Program database of rare species and critical habitats; Creates inventory and monitoring protocols; ..."

H. CRMC -- Submerged Habitats Monitoring

" Eelgrass (Zostera marina L.) is a submerged aquatic vegetation (SAV) that has been recognized as a critical marine resource and is currently protected by both Federal (Clean Water Act; 33 U.S.C. 26 Section 1251 et seq.) and State legislation (RI Coastal Resource Management Plan, Section 300.18). Eelgrass is a vital resource for an abundance of marine life, including economically important finfish and shellfish. The health and vitality of eelgrass beds is a direct indictor of estuarine productivity and function (Orth et al. 1993). The RI Coastal Resources Management Council (CRMC) is the Rhode Island coastal zone management agency charged with implementing the Coastal Resources Management Plan. The goals of the CRMC are to preserve, protect and where possible, restore SAV habitat (CRMP 300.18.C.1). Even with this federal and state legislation in place, Rhode Island currently does not have a long-term monitoring program for SAV. Routine monitoring and mapping of Rhode Island's SAV habitat will be essential to coastal managers and researchers by making it possible to follow trends in health and aerial extent of the local populations."

Question: Are biodiversity/habitat monitoring data readily available, synthesized, integrated, and in a form and format to support the information needs of decision-maskers and resource managers?